ABSTRACT

An ink jet printhead chip includes a substrate that incorporates drive circuitry. A plurality of nozzle arrangements is positioned on the substrate. Each nozzle arrangement includes nozzle chamber walls that define a nozzle chamber and an ink ejection port in fluid communication with the nozzle chamber. The nozzle chamber is in fluid communication with an ink supply channel through the substrate for supplying the nozzle chamber with ink. A closure is operatively positioned with respect to the ink supply channel. The closure is displaceable between a closed position in which the closure closes the ink supply channel and an open position in which ink is permitted to flow into the nozzle chamber. An actuator is connected to the drive circuitry and the closure so that, on receipt of an electrical signal from the drive circuitry, the actuator can act to displace the closure between the closed and open positions. An ink reservoir is in fluid communication with each ink supply channel. A source of oscillating pressure imparts an oscillating pressure to ink in the reservoir, so that, when the closure is displaced into the open position, a drop of ink can be ejected from the ink ejection port.